I've heard that you folks have been looking for commentary with regard to the recent Microsoft antitrust case. If true, I'm sure you've been inundated. Well, here's my $.02:

First, a little history.

Way back in 1977 a fellow named Gary Kildall developed a common operating system for the Intel family of microcomputers, he called it 'Control Program for Microprocessors' or CP/M. Prior to the introduction of the product there were probably a hundred different companies making Intel (8080 chip) based microcomputers, most of which had proprietary control programs and were incompatible - i.e. any application had to have a different version for each company. CP/M changed that, with its introduction - and it was designed to run on any 8080 based machine - application programmers had to write only one version. Kildall formed a company called 'Digital Research Inc.' (DRI)to develop and produce CP/M.

In the late 1970's/1980 time frame, Intel designed an improved microprocessor chip it called the 8086. Digital Research developed a version of CP/M for that chip called CP/M-86.

IBM designed its original Personal Computer around that chip. But while IBM had many operating systems, it did not have one for the PC. IBM first went to Digital Research to have them develop the operating system. There are many versions of what happened, most likely IBM reps 'dropped in' on Kildall and he wasn't in. In any case, the IBM reps left Digital Research and flew to Seattle to talk to Microsoft. At the time, Microsoft's product line consisted of a BASIC interpreter called MBASIC, an assembler and linker called M80 and L80 respectively.

IBM asked Gates if he could come up with an operating system for the soon-to-be-released PC. Gates said 'sure' and signed on to do it. After IBM left, he went across town to a company called 'Seattle Computer Products' and purchased the rights to their 8086 operating system called QDOS, for 'Quick and Dirty Operating System,' for about $50,000. This is the product that became PC-DOS and MS-DOS (for PC clones not built by IBM).

When IBM released their PC, it was a box with 256KB of RAM and two floppy disk drives. With a monitor and keyboard it would set one back about $2,500. No operating system was included. IBM would also sell you PC-DOS for an additional $40, or it would sell you CP/M-86 for $240. Both worked, but note the price difference.

A tidbit of information that was never publicised is the fact that Gary

Kildall noted that Microsoft's product contained code that he had written, copied without permission or license (whether by Seattle Computer or by Microsoft is irrlevant, the code was stolen). Kildall chose not to confront Microsoft but to try to coexist with them, he was also worried about his relationship with IBM.

  In the mid 1980s, after the PC market got away from them, IBM decided to try to recapture it by bringing out a whole new proprietary line of Intel based computers with a whole new operating system. This was to be called the Personal System/2 or PS/2. IBM contracted with Microsoft to form a 50/50 partnership to develop a whole new operating system for its new microcomputer line, that was to be called 'Operating System /2' or OS/2.

  Microsoft, however, pursued an additional and very different strategy. While delaying development of OS/2, it pushed development of its own graphical user interface very hard, and got it out before OS/2 was ready. That program was called Windows. And, of course, since it was solely a Microsoft product, Microsoft didn't have to split any revenues from it with IBM.

  IBM finally 'fired' Microsoft from the OS/2 project around 1990 and completely reworked the product. This became OS/2 version 3, or 'Warp,' and was released in early 1994. Unfortunately, Microsoft already owned the market for operating systems on Intel based machines by then, and people and companies were reluctant to switch to OS/2, which was (and remains) clearly a superior system. OS/2 version 3 is also superior to the vaunted Windows 95 (which, incidentally, contains concepts and ideas Microsoft adopted from the OS/2 project).

  Another reason for customers' reluctance to switch at the time was Microsoft's lock on the hardware manufacturers with its 'per-processor' licensing contracts, which discouraged manufacturers from furnishing competing software products with their hardware. Microsoft lost a lawsuit over this practice years ago and supposedly doesn't do it any more.

  The bottom line is that Microsoft has *never* competed fairly since it got into the operating system business back around 1980/1981.

  Something else that's been lost in all of the dust and hoopla surrounding the Microsoft case is exactly what an operating system is. A computer operating system exists to manage the hardware, perform input/output (read/write) operations and perform calculations, period. The operating system also handles the interface between the application and the hardware (and, in multiprogramming systems - systems that run more than one application at a time - it keeps the applications from interfering with one another). That's all. The Graphical User Interface is an application, as are file (web) browsers (the web is after all is

just a very large filing system), music players, communications software,
etc. Microsoft chooses to integrate many applications into its operating
system, some it purchases (Doublespace), some it licenses (SpeedDisk, from
Norton), some it steals (Stacker, from Stac Electronics, which sued and
won), and some it clones (Media player, which competes with Real Audio).

   What to do about it? Breaking up the company has already been rejected,
any fines would just be passed along to Microsoft's customers. My favored
solution is to require Microsoft to provide all of its customers with all
of its software products and services, one bundle, one price. Whether its
for a low end ersonal Digital Assistant or a high-end server doesn't
matter, they all get everything. Perhaps tack on a tax of $100 or so per
copy/license of the product. Microsoft should also be required to place
their operating system's 'Applications Program Interface' or 'API' in the
public domain, so that other operating systems such as Linux or OS/2 can
be modified to run programs written for the Windows operating system.

As I said at the top, it's just my $.02.

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